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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,134	09/20/2006	Akinobu Miyazaki	14434.101USWO	4778

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EXAMINER

ROBINSON, LAUREN E

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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02/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,134	Applicant(s) MIYAZAKI ET AL.	
	Examiner LAUREN ROBINSON	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20 Sept 2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Mitsui et al. (US Publication 2003/0129546).

Mitsui et al. teach a dielectric paste and the method of making a plasma display comprising the dielectric paste (abstract). They also teach that the plasma display is a panel as illustrated by the figures in the reference (Pg. 2, Par. 0019). Furthermore, they teach that the panel is also comprised of a display electrode and an address electrode wherein the dielectric layer is formed on the display electrode (Pg. 6, Par. 0068). Also, the dielectric layer is comprised of glass powder (Pg. 5, Par. 0056) wherein the glass powder is comprised of 3-50 wt% silica, 5-40 wt% boron oxide, 4-40 wt% zinc oxide, 10-85 wt% bismuth oxide ((Pg. 5, Par. 0058), and can be comprised of 4% alumina (Pg. 8, Par. 0105) and 12% strontium oxide (SrO) (Pg. 8, Par. 0108). The reference does not disclose the need for lead oxide in the layer and therefore, this corresponds to the applicants' claim that 0 wt % PbO can be present (**Claim 1**).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being obvious over Mitsui et al. (US Publication No. 2003/0129546) in view of Kosaka et al. (US Patent No. 6,207,268).

Consider claim 2: As discussed above, Mitsui et al. teach a plasma display panel comprising a display electrode, an address electrode and a dielectric layer formed on the display electrode. Also as discussed above, the dielectric layer is comprised of glass with the applicants claimed constituents and amounts of claim 1. However, *Mitsui et al.* is silent with regard to a protective layer formed over the dielectric layer wherein the protective layer has MgO as its main component.

Kosaka et al. teach a transfer sheet for forming dielectric layers and forming plasma display panels (abstract). The reference teaches that the plasma display panel can be comprised of an electrode with the dielectric layer applied thereon and then a protective layer comprised of MgO applied on the dielectric layer (Col. 8, lines 53-67). The reference teaches that the dielectric layer is also considered an ink layer (Col. 9, lines 63-68) and the protective layer is used to prevent damage to the dielectric ink layer (Col. 12, lines 11-15).

Mitsui et al. and Kosaka et al. disclose analogous art related to plasma display panels comprising an electrode and a dielectric layer disposed on the electrode. As such, it would have been obvious to one of ordinary skill in the art to modify Mitsui et al.

to include the protective layer comprised of MgO from Kosaka et al. in order to prevent damage to the dielectric layer (**Claim 2**).

Consider claim 3: Mitsui et al. also teaches that the glass dielectric layer is cured at a temperature range of 140 to 300 degrees Celsius (Pg. 6, Par. 0076) and heated at a temperature range in between room temperature (~ 20 to 23.5°C) and 500°C (Pg. 7, Par. 0081). The reference also teaches that glass powders used in the above layer and cured/heated at the above temperatures have a linear thermal expansion coefficient of about $75 \times 10^{-7}/^{\circ}\text{C}$ (Pg. 8, Par. 0105-0106 and 0108). Due to this teaching and the above modification, Mitsui et al.'s teaching now corresponds to applicants claim 3 (**Claim 3**).

Consider claim 4: The examiner notes that claim 4 is a product-by-process claim and according to the MPEP 2113 [R-1], the claim may be limited by and defined by the process, but determination of patentability is based on the product itself. Therefore, the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.

In the instant case, the reference teaches that the dielectric layer comprised of the glass powders discussed previously, is also comprised of a binder resin (Pg. 7, Par. 0086) and can be comprised of an organic solvent (Pg. 6, Par. 0073). The dielectric layer is formed on the electrode as also mentioned previously wherein the dielectric layer (represented as "2" in Figure 2) covers the electrodes (represented as "1" in Figure 2) and the layer is then baked by curing (Pg. 6, Par. 0076), heating and firing

(Pg. 7, Par. 0081). Due to this teaching and the above modification, Mitsui et al.'s teaching now corresponds to applicants claim (**Claim 4**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAUREN ROBINSON whose telephone number is (571)270-3474. The examiner can normally be reached on Monday to Thursday 6am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-2721284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lauren E.T. Robinson
Examiner
AU 1794

/LAUREN ROBINSON/


CAROL CHANEY
SUPERVISORY PATENT EXAMINER

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